CLAIMS

What is claimed is:

- A universal vaccine for treating tumors of any origin, comprising:
 at least one telomerase reverse transcriptase(hTRT) peptide in an amount effective for initiating and enhancing a cytotoxic T lymphocyte (CTL) response against mammalian cancer cells; and
 - a physiologically acceptable carrier.
- 2. The vaccine according to claim 1, wherein the telomerase peptide is modified to enhance binding to a major histocompatibility complex (MHC) molecule.
 - 3. The vaccine according to claim 2, wherein the MHC molecule is a Class I.
 - 4. The vaccine according to claim 3, wherein the MHC molecule is a human leucocyte antigen (HLA).
 - 5. The vaccine according to claim 4, wherein the MHC molecule is HLA-2.
- 15 6. The vaccine according to claim 1, wherein the hTRT peptide is a human telomerase reverse transcriptase peptide.
 - 7. The vaccine according to claim 6, wherein the peptide is from about 7 to about 15 amino acid residues in length.
 - 8. The vaccine according to claim 1, wherein the peptide is effective alone.
- 20 9. The vaccine according to claim 1, wherein the peptide is effective in combination with other peptides.

- 10. The vaccine according to claim 1, wherein the vaccine also comprises an adjuvant.
- 11. The vaccine according to claim 1, wherein the carrier is a mammalian cell.
- 12. The vaccine according to claim 11, wherein the carrier mammalian cell is atransfected or transgenic cell.
 - 13. A synthetic hTRT peptide restricted by a Class I major histocompatibility complex (MHC) molecule.
 - 14. A method for inducing and enhancing a CTL response against cancer cells, comprising:
- harvesting mammalian blood leucocytes;

 pulsing with an effective amount of hTRT; and

 contacting cancer cells with an effective amount of pulsed leucocytes.
 - 15. The method according to claim 13, wherein the contacting is accomplished *in vitro*.
- 15 16. The method according to claim 13, wherein the contacting is accomplished *in vivo*.
 - 17. A method for targeting cytotoxic lymphocytes (CTL) to tumor cells by administering an effective amount of telomerase transcriptase (TRT) peptide to a mammalian recipient, which amount is effective to attract CTL to the tumor cells.
- 20 18. The method according to claim 16, wherein the recipient is a cancer patient.

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